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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/670,489	09/26/2000	Hiroshi Maruyama	JP920000016US1	4307

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EXAMINER

HUYNH, CONG LAC T

ART UNIT	PAPER NUMBER
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2178

DATE MAILED: 04/23/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.	Applicant(s)	
09/670,489	MARUYAMA ET AL.	
Examiner	Art Unit	
Cong-Lac Huynh	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/26/00 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This action is responsive to communications: the application filed on 9/26/00.
2. Claims 1-13 are pending in the case. Claims 1, 5, 6, 8, 12, 13 are independent claims.
3. Applicant's election of Group I in Paper No. 5 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

#### ***Priority***

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Specification***

5. The disclosure is objected to because of the following informalities: the phrase "*The, an* obtained encoded data string 203 ..." (specification, page 12, line 22) is a typographical error. Appropriate correction is required.

#### ***Drawings***

6. Figures 1 and 2 are objected to since the reference number "21" of the decompressor in figure 1, which is not consistent with the reference number "13" of the decompressor in figure 2. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-4, 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding independent claim 1, the preamble recites "a data compression apparatus for encoding data and for compressing the encoded data" whereas one limitation of the claim recites "a compressor for compressing said contents of said document extracted by said encoder and for encoding the compressed contents." Encoding data then *compressing the encoded data*, and compressing data then *encoding the compressed contents* are two different processes and lead to different results.

Therefore, it is unclear why to carry out a step which is different from the introduction in the preamble.

Independent claim 8 is also rejected under the same issue.

Dependent claims 2-4, 9-11 are rejected for fully incorporating the deficiencies of their base claims 1 and 8.

In addition, claim 8 recites the limitation "encoding said structure part using said grammar rules for said tree local language" in lines 7-8. There is insufficient antecedent basis for this limitation in the claim since "grammar rules" are not mentioned prior to said limitation.

Dependent claims 9-11 are rejected for fully incorporating the deficiencies of their base claim.

Also, claim 11 recites "the data compression method according to claim 8, further comprising: a step, to be performed after said step of encoding said structure part of said document, of employing another general-purpose compression and encoding method to further compress and encode said encoded structure part of said document." It is unclear why to encode the structure part, which is already encoded.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1, 4, 6-8, 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murashita (US Pat No. 6,330,574 B1, 12/11/01, filed 3/30/98).

Regarding independent claim 8, Murashita discloses:

- reading a document written in a tree local language in which data are represented by a labeled tree structure, and dividing said document into a structure part and contents (figure 2, #30, #50, figure 11, col 15, line 10 to col 16, line 25, col 20, line 60 to col 21, line 20: reading a SGML document and discriminating the tags in a SGML document by the tag discriminating unit to extract tags from the document inherently show that the tags in the SGML document is separate from the content of the document via tag extraction where SGML is a tree language, and data in the SGML document is represented by tag names of hierarchical structure such as TITLE, SECTION, SUBSECTION; it is also noted that the tag separation from the content suggests that the document be divided into tags and contents)
- encoding said structure part for said tree local language (figures 2 and 6, #60: document instance in which only tags are coded)

- compressing said contents of said document extracted by said encoder and encoding the compressed contents (figures 2, 6 : apply compressing including coding to data other than tags, which is the content of the SGML document)

Murashita does not explicitly disclose using the grammar rule in said encoding the structure part for said tree local language.

Instead, Murashita discloses using DTD for defining and creating the tag code table for the tags in a SGML document where the tag codes are different from codes for data other than tags (col 15, lines 10-41).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Murashita to include using the grammar rules in encoding step for the tree local language since using DTD to define different codes for the tags of the document suggests a grammar rule for arranging the tags in the document that reflect the structure of the document.

Regarding claim 11, which is dependent on claim 8, Murashita discloses employing another general-purpose compression and encoding method to further compress and encode said encoded structure part of said document (figures 2, 6, col 5, lines 43-63: compressing the tags of the SGML document where compressing includes coding the tags of the document).

Independent claims 12 and 13 are for a storage medium and a transmission apparatus of method claim 8, and are rejected under the same rationale.

Independent claim 1 is for a data compression apparatus of method claim 8, and is rejected under the same rationale.

Regarding claim 4, which is dependent on claim 1, Murashita discloses compressing and encoding not only for said contents of the document but also for the structure of the document (col 5, lines 43-63: compressing not only when data is a tag, which shows the structure of SGML document, but also when data is not a tag, which is the content of the SGML document where compressing including coding the tags and data other than tags).

Independent claim 6 includes the same units as in claim 1 for storing grammar rules, reading a document, dividing said document into a structure part and contents, encoding said structure part, compressing said contents, and encoding the compressed contents, and is rejected under the same rationale.

Claim 6 further includes a storing unit for storing said structure part of said document and for storing the contents of said document that are compressed and encoded by the compressor. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Murashita to include said storing unit for such storing function since it was well known that any system has a storing unit for storing all kinds of data for later use.



Claim 7 is for a database system of apparatus claim 4, and is rejected under the same rationale.

***Allowable Subject Matter***

12. Claims 2-3, 9-10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Orlander et al. (WO 96/17310, 6/6/96).

Mantha et al. (US Pat No. 5,438,512, 8/1/95).

Shafer (US Pat No. 5,583,762, 12/10/96).

Crandall (US Pat No. 5,999,949, 12/7/99, filed 3/14/97).

Palmon et al. (US Pat No. 5,819,264, 10/6/98, filed 10/10/95).

Ross (US Pat No. 5,933,842, 8/3/99, filed 5/23/96).

Newsted et al. (US Pat No. 6,016,467, 1/18/00, filed 5/7/97).

Huttenlocher et al. (US Pat No. 6,011,905, 1/4/00, filed 11/8/96).

Hind et al. (US Pat No. 6,635,088 B1, 10/21/03).

Graham (US Pat No. 6,647,534 B1, 11/11/03, filed 6/30/99).

Friedman (US Pat No. 6,182,029 B1, 1/30/01, filed 8/6/99).

Sundaresan (US Pat No. 6,336,214 B1, 1/1/02, filed 11/10/98).

Ponte (US Pat No. 6,665,665 B1, 12/16/03, filed 7/30/99).

De Queiroz, Compression of compound documents, Image Processing vol. 1, IEEE 1999, pages 209-213.

Kia et al., Structure-preserving document image compression, Image Processing vol. 1, IEEE 1996, pages 193-196.


Kia et al., Structural compression for document analysis, Pattern Recognition vol. 3, IEEE 1996, pages 664-668.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cong-Lac Huynh whose telephone number is 703-305-0432. The examiner can normally be reached on Mon-Fri (8:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 703-308-5186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Clh  
4/12/04

  
**STEPHEN S. HONG**  
**PRIMARY EXAMINER**